Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-9 (canceled)

Claim 10 (new): A method for producing an electrochemical device composed of a first electrode, a second electrode, and an ion exchange membrane held between the first and second electrodes, comprising forming a catalyst layer containing a catalytic substance and polyvinylidene fluoride; and attaching one or more ion exchange groups to the polyvinylidene fluoride in the catalyst layer such that the catalyst layer contains the ion exchange groups that can be used for at least one of the first and second electrodes ;bonding the catalyst layer to a precursor of the ion exchange membrane composed of polyvinylidene fluoride to form a bonded body; and bringing the bonded body into contact with a compound containing the ion exchange groups, thereby introducing the ion exchange groups into the polyvinylidene fluoride in the bonded body through substitution.

Claim 11 (canceled).

Claim 12 (previously presented): The method for producing an electrochemical device as defined in Claim 11, further comprising dipping with heating under pressure the bonded body in a solution of a compound containing the ion exchange groups, thereby introducing the ion exchange groups into the polyvinylidene fluoride constituting the catalyst layer and the precursor of ion exchange membrane through substitution.

Claim 13 (previously presented): The method for producing an electrochemical device as defined in Claim 12, further comprising laminating the first electrode, the catalyst

layer, the precursor of ion exchange membrane, the catalyst layer, and the second electrode to form a laminated, and subsequently dipping the laminate in the solution.

Claim 14 (previously presented): The method for producing an electrochemical device as defined in Claim 10, wherein the ion exchange group includes at least one species selected from the group consisting of a sulfonate group, a carboxyl group, a phosphate group, a linear sulfone group, and a perfluorocarbon liner sulfone group.

Claim 15 (previously presented): The method for producing an electrochemical device as defined in Claim 10, wherein the catalyst substance contains at least one species selected from the group consisting of platinum, ruthenium, palladium, silicon, carbon, aluminum, magnesium, cobalt, iron, nickel, molybdenum, and tungsten.

Claim 16 (previously presented): The method for producing an electrochemical device as defined in Claim 10, wherein the ion exchange membrane includes at least one species of ion exchanging material selected from the group consisting of perfluorocarbon sulfonic acid, non-fluorocarbon sulfonic acid, partially fluorinated carbon sulfonic acid, perfluorocarboxylic acid, non-fluorocarbon carboxylic acid, partially fluorinated carbon carboxylic acid, perfluorophosphoric acid, non-fluorocarbon phosphoric acid, and partially fluorinated carbon phosphoric acid.

Claim 17 (previously presented): The method for producing an electrochemical device as defined in Claim 10, wherein the ion exchange membrane is prepared to function as an electrolyte.

Claim 18 (previously presented): The method for producing an electrochemical device as defined in Claim 10, wherein the electrochemical device includes a fuel cell.